Lakeland
Laboratory

Technical Bulletin

12/7/2020

PERIPHERAL SMEAR REVIEW FOR
HEMATOPATHOLOGY CONSULTATION

Historically students and residents have been taught to request a peripheral smear review by a pathologist for a host of reasons simultaneous to ordering a complete blood count (CBC) with differential. Technological updates to our Sysmex XN analyzers in the laboratory have now largely removed the need to separately order a peripheral smear review. The Sysmex XN analyzer counts thousands of cells including immature granulocytes yielding a more accurate count versus a manual differential performed by the technologist or pathologist. Sysmex's XN analyzers can also identify reactive or abnormal lymphocytes, blasts, and most morphological abnormalities identified in any of the cell lineages. Previous hematology analyzers could not identify or quantify immature granulocytes, so the manual differential was the only way to identify cells less mature than segmented neutrophils.

Spectrum Health Lakeland Laboratory has criteria in place for the XN analyzers that reflexively require the technologist to review the slide. These criteria capture almost all the reasons why a separate peripheral smear review may have been requested in the past. With current technology, the XN analyzer will identify significant cell count abnormalities and abnormal cellular morphologies. Further criteria has been established by the laboratory and pathology to indicate clinical necessity for a pathologist formal peripheral smear report.

In summary, you only need to order a <u>CBC with Differential</u> and your patients will receive the same high level of diagnostic analysis when compared to ordering both a CBC with differential and separate peripheral smear review.

For additional information or questions please contact Spectrum Health Lakeland Laboratory Client Services:
- Call (269) 983-8311
- 1-800-513-9193

Or visit the Lakeland Laboratory website: https://www.spectrumhealthlakeland.org/medical-services/laboratory-services then select laboratory test catalog from the drop-down menu.